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MEDICAL NOTES

IN

EGYPT



BY

FREDERICK PETERSON, M.D.,

PROFESSOR OF NERVOUS DISEASES IN THE UNIVERSITY OF VERMONT; CHIEF OF
CLINIC, NERVOUS DEPARTMENT, COLLEGE OF PHYSICIANS AND SURGEONS,
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HOSPITAL FOR NERVOUS AND EPILEPTIC; AT-
TENDING PHYSICIAN TO ST. SAVIOUR'S
SANITARIUM FOR INEBRIATE
WOMEN, NEW YORK CITY.

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WINTERING IN EGYPT.*

THERE is probably no other country in the world so delightful as Egypt for a winter sojourn. It is equally fascinating for the traveller in search of recreation and for the invalid in quest of health. One is placed in an environment at once tonic to the mental and physical organization. The western mind, whether healthy or morbid, is certain to be both pleasantly impressed and deeply stirred on beholding strange races, curious costumes, oriental manners and habits, Saracenic architecture, a land of deserts, oases, palms, and the river Nile, a land abounding in magnificent monuments of an ancient civilization, and over all of which hangs unchangeably a vivid, cloudless, splendid sky. Change in itself is always a tonic, strong in a direct ratio to the amount of novelty, and where this therapeutic agent is indicated in its most powerful form, Egypt must be the prescription.

For the invalid Egypt has remedial qualities which are entirely her own, and not to be found elsewhere, modes of life which are restful, peculiarities of climate which are unique. It must be taken into consideration, too, that this desirable resort is not so far from our shores as it may seem, and that the time of travel is being gradually reduced. Alexandria is five or six days from London. It is but twelve to fourteen days from New York (North German Lloyd to Genoa eight to nine days, rail to Brindisi one day, P. & O. steamer to Egypt three days; or to Paris eight days, rail to Marseilles fourteen hours, French Packet to Alexandria four to five days).

*From the *N. Y. Medical Record*, Aug. 20, 1892.

Egypt is a narrow green ribbon of land, with the Nile, not as broad as the Missouri River, flowing through it, and endless stretches of desert on either side. These thousands of square miles of barren dry sand rob the air of most of its moisture, dissipate clouds and prevent rains, and completely sterilize the atmosphere of pestiferous germs.

The climate of the Delta is not treated in this article, because no part of it can be considered a health-resort for Americans or Europeans (many residents of Egypt spend their summers at Ramleh or Alexandria), and because it differs materially from the rest of Egypt. For instance, Cairo, which lies at the upper angle of the Delta, has twelve rainy days in the year, while at its other extremity, Damietta and Alexandria, rain is still more frequent.

Interesting and charming as Cairo is to most people, it is not here that the invalid should take up his winter residence, although he may make it his headquarters from which to depart on his various excursions. The general sewer system of Cairo is in very bad condition, but that of most of the hotels is good. The mortality of Cairo is extraordinary, almost equal to that of Madras. The Cairo death-rate is 46 in 1,000; Madras, 48; Paris and Berlin, 23.50; London, 17.4. In winter one may spend some very miserable, cold, damp days in Cairo, for the hotels are rarely provided with means of heating the rooms, and few of them have a sufficiency of chambers with a southern exposure. I experienced about Christmas time, last year, four most uncomfortable rainy and cold days in succession in Cairo, and suffered more from it than one winter month in Florence, some years ago, treasured up as one of my bitterest memories of disillusion in sunny Italy.

Season.—The season for tourist or invalid is the seven months from October to April, inclusive, but one may remain through May without discomfort.

The other months are objectionable because of the heat and the inundation of the Nile.

The seeker after health has one of three courses open to him on reaching Egypt. He should either go into winter quarters at Helouan, Gizeh, or Luxor—take a dahabeeyeh voyage up the Nile for three or four months, or go on camping excursions in the desert. This last suggestion will be a novel one, I think, to the European physicians who send patients to Egypt and to the physicians residing there, but it was very apt to occur to an American physician, familiar with some of our tent hospitals, and the benefits to great numbers of invalids, especially consumptives, of camping trips in our Rocky Mountain regions. Camping has advantages in Egypt, too, that are never to be obtained in America, the absolute certainty of warm sun and rainless days, and the means of carrying any quantity of necessities and luxuries in the way of edibles and household furniture.

Before describing specifically these courses, however, it will be well to consider the climatological features of Egypt in detail. Most of the observations at our command have been made at the Khedivial Observatory at Cairo, and while these answer fairly well for Helouan and Gizeh, which are in the immediate neighborhood of that city, there are unfortunately no elaborate records as yet available to throw light upon the climatological conditions of Luxor, four hundred and fifty miles farther south, or out in the desert at various distances from the Nile Valley. Dr. F. M. Sandwith, of Cairo, in his admirable book, "Egypt as a Winter Resort," has made a careful study of the observatory records, and also of such others as have been communicated by physicians in their journeys up the Nile, and to this book I am mainly indebted for the following statistical facts as to the Egyptian climate. Where it seemed to me ad-

vantageous for the reader, I have introduced figures for comparison with other health-resorts.

Elevation above Sea-level.—Helouan, Gizeh, Cairo, 100 to 200 feet; the Mokattam Hills, just back of Cairo, 600; Luxor, 292.

Temperature.—The Cairene isothermal line runs between Algiers and Santa Cruz, and Florida and Canton. Freezing-point is never reached in Cairo, but absolute minima of 35° and 36° F. were noted on two nights in January, 1887 and 1888, respectively. The desert is sometimes piercingly cold at night, as I found in a camping trip to the Wadi Natroon. Water in a shallow dish will occasionally freeze on exposure to a desert night wind. The thermometer readings for the seven seasonable months may be best judged by reference to the following table (Fahr.)

	Mean f Maxima.	Mean of Minima.	Mean of Means.
	Degrees.	Degrees.	Degrees.
October	84.0	64.8	74.3
November.....	74.2	56.3	64.4
December	67.7	50.4	58.4
January.....	61.4	46.6	53.6
February	65.3	48.8	57.0
March.....	73.2	53.0	62.8
April	81.2	59.9	70.4

Rainfall.—Cairo, a trifle over one inch annually, distributed over twelve to fifteen days of the winter months. The same figures for Helouan and Gizeh. At Luxor it is not quite true, as has been facetiously stated, that "it rains only once in 4,000 years," but rain is so rare a phenomenon that the date and duration of a shower are carefully recorded, not only by Luxor residents, but by transient travellers, as an extraordinary experience. Showers were noted once in 1882, once in 1887; and Dr. Boase remarked a three-minute rain in 1888.

It is interesting to compare statistics as to the annual rainfall in various resorts, although this is not as important as to ascertain the number of cloudy and rainy days at any health station during the season.

	Annual rainfall in inches.	Number of rainy days during seven months; winter season.
Luxor.....	Minute fraction of inch, if any.	Usually none.
Cairo.....	1	12
Hyères.....	33.50	32
Algiers.....	32	71 (six months)
Pau.....	43	50 (six months)
Nantucket.....	45	91
Aiken.....	46.48	41 (six months)
Jacksonville.....	55.93	72
Denver.....	11.41	39
Los Angeles.....	13.13	45
White Mountains.....	50	87

Dew.—In Lower Egypt, along the Nile, and in the desert near the Nile, dews are always present, so that walking in the green fields at night, and up to nine o'clock in the morning, is unpleasant. At Luxor and the First Cataract, dew is almost unnoticeable.

Humidity.—The most valuable feature of the Egyptian climate is its dryness. At Cairo the relative humidity is least in June (44), and the annual average relative humidity is 58.4; but for the seven months during which Cairo is frequented by invalids, the average is higher, 63.2 (London over 90 in winter). This I base upon Dr. Sandwith's table from the Observatory records for five years. It must be remembered that this Observatory is situated near the river and at the apex of the Delta. Often, even at Cairo, the humidity on individual days is phenomenally low, for instance, down to 3 one day in April, 1887, and once 4 in March, 1888. These figures apply also to Helouan and Gizeh. As regards the humidity at

Luxor, there are as yet but few figures at command, but from such as have been taken, we learn that the air there is much dryer than at Cairo, the average being twelve to fifteen per cent. less. Thus far no observations as to this important particular have been made in the desert proper, remote from the Nile. Undoubtedly there the humidity is still less, probably the least of any place in the world, and it is to be hoped that desert records will ere long be made. The following table will illustrate the difference in mean annual humidity of various places in the world.

Luxor.....	50.5	Asheville, N. C. (Gleits-	
Cairo.....	58.4	man).....	70.10
Greenwich.....	87.0	Mt. Washington.....	86.00
Algiers.....	70.7	Florida (Jacksonville)...	68.00
New York	73.0	Adirondacks (Skinner)...	70.50
Aiken (Geddings).....	64.04		

Air-pressure.—The barometric readings at the Khedivial Observatory for five years show an average of 29.86, never above 29.99 in any month. Comparing this mean air-pressure with some other health-resorts, we have :

Cairo (Sandwith).....	29.86
Nice (Collier).....	29.60
Hyères (Cormack, ...	30.16

Clouds.—Not infrequent at Cairo. In the desert and at Luxor, almost unknown.

Winds.—The prevailing wind at Cairo is from the north; in January, however, from the southwest. The average force in miles calculated by the anemometer is 2.9 for the year, but for the seven winter months is abated to an average of 2.3.

At Luxor the prevailing winds from November to March, inclusive, are southwest, northeast, and northwest, and the average force in miles for these five months is exceedingly low, 0.9.

None of the winds in Egypt are uncomfortable or dangerous, like the föhn, mistral, sirocco, and solano,

of some other resorts, with perhaps the exception of the khamseen. Khamseen is the Arabic word for "fifty," and the wind is thus named because it is apt to blow during some of the fifty days following Easter Monday. The number of khamseen days in a year varies from 4 to 20. It blows for three days as a rule, but may continue longer. It is very dry and hot, and the air is commonly loaded with fine sand. It comes from the south or southwest. I experienced one day of khamseen in the Lybian desert while travelling by camel in a small caravan, in January last, but did not find it very uncomfortable. According to Dr. Sandwith, "the general effects are a little excitement and stimulation of the system, a more rapid succession of ideas, and increased action of some of the functions, followed by listlessness, headache, and languor."

Water-supply.—The water of the Nile, or of wells in the Nile Valley, is, of course, used altogether by the residents. Visitors often drink nothing but bottled waters, such as Apollinaris and Giesshübler, but with proper filtration there is no water in the world superior to Nile water for drinking purposes. The Cairo water company filters its water. Every dahabeeyeh and steamer on the river, and every house in Cairo and other large towns, is supplied with huge earthen jars, through the bottom of which the water filters pure and glistening drop by drop. This is on the same principle as the Pasteur filter now coming into general use in America and elsewhere, and it answers the purpose perfectly. It is needless to say that unfiltered water should never be drunk in Egypt.

Prevailing and Uncommon Diseases.—Diarrhœa is common among the natives, and visitors occasionally suffer from it unless they are duly cautious as regards warm abdominal clothing. Typhoid fever, typhus, measles, and relapsing fever are not infrequent in the overcrowded and filthy native quarters,

and there are some forty deaths from small-pox in Cairo annually. Diphtheria prevails to a certain extent. Scarletina, whooping-cough, and mumps are very rare. Pleurisy, bronchitis, and pneumonia are frequent, but only from a careless exposure at night; for the night is often a strong contrast to the day in point of temperature. Malaria in a mild form is frequent along the river in the warm months.

Consumption is almost unknown. The Egyptians seem scarcely ever to have it, but the blacks from the far South (Nubia, Abyssinia, Soudan), on coming to Lower Egypt, which is damp and cold in comparison with their native land, are subject to it.

Entozoal disorders are common, and I saw several cases of anchylostoma duodenale with Dr. Sandwith at the Kasr-el-Aini Hospital. Ophthalmia, as is well known, is extraordinarily prevalent in Egypt, and has been for thousands of years, but foreigners seldom suffer from it. Sunstroke is rarer than one might suppose, and the remarkable precautions taken by some tourists to protect their heads are quite unnecessary.

Acute rheumatism, gout, and rheumatoid arthritis are practically unknown in Egypt.

I was myself especially interested in insanity and nervous diseases among the Egyptians. Elsewhere I have called attention to the phenomenal rarity of insanity and the entire absence of paralytic dementia among the Egyptians.¹ Egypt with six millions inhabitants, has but one asylum, containing two hundred and fifty inmates, whereas New York State, with the same population, has over fifteen thousand insane in its numerous asylums.

I observed several cases of chronic poliomyelitis, and numerous infantile spastic paralyses, most of

¹ Insanity in Egypt, by Frederick Peterson, *Medical Record*, May 21, 1892.

them making a living by begging through the streets or around monuments and tombs. The climate of Egypt is so favorable and food so cheaply and easily obtained, that such cases as would with us be put into hospitals for incurable diseases, here live out-of-doors, sleeping where they like, and satisfying their hunger with a piece of native bread thrown to them, and an onion or two taken from a neighboring field. Wherever I would go I found it easy to establish an out-of-door clinic, for as soon as it was understood that I was a physician, my tent or boat would be sought by any number of applicants for medical advice and drugs.

Diseases Improved and Cured by the Climate of Egypt.—This climate is invaluable in all manner of chronic diseases of the respiratory organs, for delicate lungs or incipient phthisis, for rheumatic affections, for convalescents from any acute disease. As Dr. Sandwith aptly remarks, the most important question really is to determine what kinds of patients *not* to send to Egypt. As to this, each consulted physician must decide upon the merits of individual cases. It is almost needless to say that moribund phthisical patients, or invalids with apoplectic tendencies, should not be sent to Egypt.

There is no doubt that a voyage on the Nile, or a residence in Cairo, Gizeh, Helouan, or Luxor, or camp life in the desert, is a valuable indication in many forms of nervous and mental disease, such as neurasthenia, insomnia, over-work, hypochondriasis, hysteria, melancholia simplex, and other mild forms of incipient or threatened insanity. There is no better climate for intractable rheumatic and malarial neuralgias, sciatica, and the like.

Having given these preliminaries, it now remains to consider briefly the means of taking the best advantage of what Egypt offers to invalids.

Gizeh, Helouan, Cairo.—On reaching Egypt one disembarks at Alexandria preferably (though one may also land conveniently at Ismailia), and then makes his way by rail at once to Cairo, where he takes a sunny room at one of the good hotels (Shepherd's, Continental, New, or Royal), and prepares his plans for the winter. If a physician is needed there are many good English and German physicians in Cairo.

Gizeh and Helouan are the sanatoria of Cairo. Both are in the desert, and both within easy reach of the city and good medical care.

At Gizeh, seven miles from Cairo, is merely an English hotel (the Mena House) on the edge of the desert, and almost in the shadow of the three great pyramids and the Sphinx. It is as perfect in all of its appointments, sanitary arrangements, water supply, etc., as any hotel can be. Rooms with fireplaces and sunshine can be obtained. Horses, carriages, camels, and donkeys are on hand. A coach runs to the city daily. There is a good library and reading-room, billiard-room, tennis-court, golf links, archery and cricket ground, swimming-bath, and a resident physician. The advantages here are the warm, dry, aseptic air of the desert, the quiet surroundings, the nearness to Cairo, and the interesting monuments of antiquity.

Helouan I have described more in detail in another article.² It lies fifteen miles to the south of Cairo, and is reached by numerous trains daily in forty minutes. I will say here that the Egyptian railway trains are much superior in point of comfort and speed to most continental trains. There are two hotels at Helouan, and there are a great many pretty villas that may be hired for the season. The village is about three miles from the Nile, and very near the

² An Ancient Spa, by Frederick Peterson, *New York Medical Journal*, 1892.

great cliffs of the Mokattam range. The chief attraction here is the sulphur, iron, and saline thermal springs. The baths are well constructed and under European supervision. This is the place *par excellence* for chronic rheumatism and gout. One is really within easier reach of Cairo here than at Gizeh. The desert surrounds the little town. There are the usual amusements of a spa in Europe, and in addition historical attractions—the ancient quarries near by, and the pyramids of Sakkarah and remains of Memphis just across the river.

Luxor.—It has already been stated that Luxor is dryer, warmer, and sunnier than any of the resorts about Cairo. By next season there will probably be trains running the whole distance of four hundred and fifty miles from Cairo south to Luxor, but at present one takes a sleeping car to Assiout (twelve hours), and goes thence by steamer or dahabeeyeh. Luxor has two good hotels and an English physician. The town has four thousand inhabitants. Close by are the temples and ruins of Luxor, Karnak, and Thebes. There is postal and telegraphic communication with all parts of the world.

The hotel prices in Egypt are all rather below those charged in most American health-resorts.

These three places, Gizeh, Helouan, and Luxor, are the chief, in fact the only, resorts in Egypt for invalids who intend making, or are compelled to make, a protracted stay in a hotel. I have no doubt that in time other and still better sanatoria will be established in spots still better adapted to make use of the wonderful properties of the desert climate—places perhaps remote from the Nile and its seven inches per month of evaporating water, and which will be desert health-resorts in every sense of the word.

The Nile Voyage.—If there is anything in life which will steal away worries and cares, soothe the

tired brain, calm the unstrung nerves, bring back
vagrant sleep,

“Administer to a mind diseased,
Pluck from the heart a rooted sorrow,”

it is the dream-like voyage on the Nile in a dahabee-yeh. At an expense of \$600 to \$800 per month four people have a house-boat, four bed-rooms, dining-room, sitting-room, bath-room, large deck with awning, captain and crew of eight to ten or more men, cook, waiter interpreter, and food for all. One may, if one wishes, pay twice as much for the same thing, for there are always tourist companies or dragomans willing to receive it, but it is not necessary, as I have demonstrated by experience. In a dahabee-yeh you are the plaything of the wind, but although I have spent as many as eighteen days on one occasion in traversing a distance of one hundred and eighty miles, owing to contrary winds, there never was a day or an hour that hung heavily on the hands, for there is so much to do and so much to see. Perhaps this voyage has the peculiar and rare quality of making *dolce far niente* appear in its busiest aspect. At any rate, one is so much occupied with something that the weeks pass before one realizes it. This is not the place to describe how this illusion is produced of being very much occupied, when you are in reality resting and imbibing new vitality, mental and physical; books enough have been written about it to dam the Nile, as someone has observed, and to these the reader is referred for further particulars.

As there are no means of heating a dahabee-yeh on cold nights, braziers not being advisable, a Rochester lamp burning in the sitting-room will be found to answer every purpose. An assortment of books, some guns, a telescope, a photographic outfit, and other instruments, scientific or musical, which individual tastes may suggest, will be found useful and

agreeable adjuncts to such a trip. The voyage should begin about mid-December and be continued at pleasure for three or four months.

The advantages of the dahabeeyeh voyage over residence in one place are obvious. There are the same climatic features as elsewhere in Egypt. It is like living in one's own home instead of in a hotel. There is change every day, and indeed every hour.

No other river in the world could be travelled in this way. The dahabeeyeh would never be a success upon the Indian River, St. John's, Hudson, or Mississippi. It might be on the Amazon. But all along the Nile are famous ruins, temples, tombs, relics of the world's most ancient civilization, which in themselves excite the interest of every traveller, whether in good or poor health.

Cook's steamers will do very well for the wildly-rushing tourist, who is willing and perhaps able to endure any amount of haste crowding, and discomfort, but for invalids the dahabeeyehs are the only boats to be recommended. A tug to tow the dahabeeyeh is another evil that affords no adequate compensation for its noise and smoke.

Cook & Sons have dahabeeyehs also, and while they are magnificent boats their charges are proportionally high, being three times what one, sufficiently comfortable for anyone, can be obtained for by application to private owners. The average dragoman asks only twice as much as it is worth. By hiring an interpreter for the voyage and exercising only a little discretion and supervision in purchases and payments, the Nile voyage comes within the means of many people of moderate circumstances whom Cook's prices would otherwise debar from its advantages. But an invalid with unlimited means will, of course, find Cook or Gaze useful agents in attending to everything connected with the Nile trip, thus saving considerable trouble.

Camping-out in Egypt.—Camp life in Egypt is something luxurious. I have camped out on shooting expeditions in Nebraska, Dakota, and other Western places, and endured hardships that I should not care to experience again. But in Egypt, where labor and carrying cost next to nothing, where everything in the way of furniture and supplies can be stored away somewhere on a camel, where every day can be foreseen to be rainless and beautiful, life in tents becomes a pleasure.

It is always well to have some objective point in view to reach, and among the pleasantest desert trips with tents and camels are those to the Sinaitic Peninsula, to the Natroon Lakes, to the Fayoum, and to several other oases to the west of the Nile. Probably the warmest and driest for an invalid would be that from Assiout, Geergeh, or Eseh to the Great Oasis. But one may camp on the edge of the desert, traveling southward along the Nile, in that way having the advantage of more interesting surroundings; for some people might find the desert monotonous. For those who enjoy shooting, camping in the Delta or the Fayoum, or anywhere along the Nile affords ample opportunity for the gratification of this taste. There is nowhere in Egypt any very large game; a few wild boar, hyenas, jackals, wolves, foxes, and unattainable gazelles; ibex in Sinai. But this land is the winter home of all the European aquatic birds, apparently, and wild pigeons, snipe, quail, plover, also abound in phenomenal numbers. As for quail, we shot about one hundred and twelve in three hours with three guns, two of us being indifferent shots. We made shooting excursions through the Delta, to the oasis of the Fayoum, and to Wadi Natroon. As an example of the methods of camping here, I will briefly describe our equipment for the trip to Wadi Natroon, where we spent ten days. We were a party of three, and had eight camels with their drivers, a

dragoman (interpreter), desert guide, cook, hunter-guide, and a boy, two tents, three folding bedsteads with mattresses, two folding tables chairs, rugs, cook-stove, fuel, water, rifles and shot-guns, and provisions for all the party, camels included. Camel-riding becomes easy after a time. One can assume almost any position, even lying down and going to sleep, and one can read with ease. Ladies are not at all debarred from taking such trips. Everything necessary can be procured in Cairo, and the expense should not be over \$5 to \$7 per day for each traveller.

While we in America frequently enough recommend camp life in the West to certain of our patients, I believe thus far it has never been advised by authorities on Egyptian climate, probably through lack of familiarity with its value and practicability.

Clothing.— Winter clothing should be used in Lower Egypt, autumn clothing in Upper Egypt, and in the desert and on the Nile. Heavy wraps will be found useful at night.

Books.—The best book of reference for the physician and invalid is Dr. F. M. Sandwith's "Egypt as a Winter Resort" (Kegan Paul, Trench & Co., London). The best popular literary book is Charles Dudley Warner's "My Winter on the Nile." Both Baedeker and Murray publish guide books, one of which is indispensable.

THE BATHS OF HELWAN,

OR

AN ANCIENT SPA.*

THE Baths of Helwan, in Egypt, perhaps merit the distinction of being the oldest health resort of the world, and while their situation in so remote a country as Egypt may not make a reference to them so valuable to American physicians as it otherwise might be, still it may have a historical interest to many of your readers, and a few may find some practical use in the following notes of a recent visit, for the travel of American invalids in this direction is becoming greater year by year.

While I have spoken of the Helwan springs as the most ancient spa of the world, their early history is somewhat obscure. It seems reasonably certain, however, that during the eighteenth dynasty, or something over thirty-five hundred years ago, King Amenhotep sent persons afflicted with leprosy and other incurable diseases to these springs for treatment. There are perfectly authentic records of their being a health resort twelve hundred years ago, but from that time until a very recent period they had a very precarious existence, as the various layers of bricks, granite, marble, pottery, and the like found as ruins of ancient villages would seem to indicate. Somewhere about 1871 the Egyptian Government inaugurated a new era for these springs by reconstructing the baths, building a hotel, planting trees and the like, so that now a pleasant, well-built town, with palm groves and villas, and a good railway from Cairo, stands where not long ago was but a waste of yellow sand.

* From *N. Y. Medical Journal*, June 25, 1892.

Helwan is said by some to derive its name from the Arabic word *helwa*, meaning sweet; but this would hardly be suggested by the waters, which are particularly generous of their exhalations of sulphureted hydrogen. The modern spa lies fifteen miles south of Cairo in the desert, about three miles from the Nile, and with about two miles of sand intervening between it and the river. Back of it lie the barren, fantastic, and precipitous cliffs of Mokattam. It may be classed with the desert health resorts, and as such is the most accessible of all, while it partakes of that remarkable dryness and purity of air common to such situations. Its elevation is some 112 feet above the level of the Nile. Thus far about a dozen springs have been rediscovered. They are all thermal, varying in temperature from 77° to 86° F., but they differ in their chemical constitution, for some are sulphurous and others chalybeate and saline. The analyses made of most of them are as follows :

Three Sulphur Springs.—Temperature, 86° F.; sp. gr., 1·0025.

ANALYSIS OF ONE LITRE.

Gases.

Free sulphureted hydrogen....	47 c. c.,	·0731	gramme.
“ carbonic acid.....	61 “	·1200	“
“ nitrogen.....	10 “	·0126	“
			“
	118 “	·2057	“

Solids.

Sodium chloride.....	3·2000	grammes.
Magnesium chloride.....	1·8105	“
Calcium bicarbonate.....	·8050	gramme.
“ sulphate.....	·2100	“
“ chloride.....	·1880	“
Silica	·0150	“
Organic matter.....	·0015	“
	6·2300	grammes.

Two Iron Springs.—Temperature, 77° F.; sp. gr., 1·0445.

Gas.

Free carbonic acid 26 c. c., ·0511 gramme.

Solids.

Sodium chloride	37·2671	grammes.
Magnesium chloride	10·6020	"
Calcium bicarbonate	5·9422	"
Magnesium sulphate	2·3507	"
Calcium chloride	1·5250	"
" sulphate	1·0820	"
Alumina "	·5861	gramme.
Sodium bicarbonate	·2255	"
Ferrum "	·0555	"
Organic matter	·0300	"
Silica	·0180	"

59·6841 grammes.

One Saline Spring.—Temperature, 77° F.; sp. gr., 1·0152.

Gas.

Free carbonic acid 6 c. c., ·01179 gramme.

Solids.

Sodium chloride	4·0171	grammes.
Magnesium chloride	3·1158	"
Calcium bicarbonate	1·2569	"
Magnesium sulphate	1·0798	"
Sodium "	·4468	gramme.
Alumina "	·4257	"
Calcium chloride	·1610	"
Organic matter	·0330	"
Calcium sulphate	·0210	"
Silica	·0100	"

10·5671 grammes.

The chalybeate water is chiefly used for its aperient, and the saline for its purgative effects. Both are odorless and colorless. The hot sulphur springs are those which enjoy the greatest repute and are most

valuable. As soon as one enters the town their odor becomes apparent. The sulphur in the air turns silver ornaments black. The water of the springs is at first quite clear, but upon exposure to the air becomes covered with a film of sulphur and lime salts, and a greenish cryptogam, called *barégine* (from the Baréges waters of the Pyrenees) develops in it.

The bath-houses are commodious and luxurious, kept in good order, and are indeed up to the usual standard of similar institutions in the better-known health resorts. The water is artificially heated to higher temperatures when required. A European physician is in charge of the establishment, and European physicians are numerous in Cairo, near at hand. The two hotels are furnished, and unfurnished villas to let afford excellent accommodations for invalids.

The diseases for which these baths are indicated are preëminently rheumatism and certain skin disorders, and, in conjunction with the natural advantages of such springs the world over, the incomparable winter climate of Egypt is to be considered. There is almost never rain or cloud or fog, and the mean annual humidity is certainly less than that of Cairo, which is 58.4 (Greenwich 87, Algiers and New York 70). The isothermal line runs between Florida and Canton and Algiers and Santa Cruz.

Dr. Sandwith, of Cairo, summarized the monthly bulletins of the Khedivial Observatory for five years, finding the average annual rainfall to be 1.22 inches.

While we in America make comparatively little use of foreign thermal springs, still, many of our patients go to Aix-les-Bains, the springs of which are about the same in character as those of Helwan, and Aix, as well as our own Hot Springs, is in a much colder latitude than these Egyptian waters—a matter of a great deal of importance, even if the distance be great.

It is needless to say, too, that the mind has more to occupy it here than in most health resorts, for, in addition to the pleasures common to all such places—such as social diversions, riding, driving, and reading—there lie in plain view across the river the Pyramids and the mounds of ancient Memphis. The modern Egyptians are interesting in their manners and customs. The great quarries of Toura and Maaserah, from which the stones of the Pyramids were taken, are near at hand. The desert is spread all around, and, even if one be not a geologist with an eye to the innumerable fossils of the nummulitic hills, or a naturalist zealous for novel additions to his collections, or an amateur astronomer eager to gaze upon a wide and brilliant expanse of starry heaven, the desert, like the sea, possesses a fascination of its own which is difficult to define or impress upon another with empty words.

HELWAN, EGYPT, *January 20, 1892.*

THE INSANE IN EGYPT.*

It is well-known that the population of the State of New York is in the neighborhood of six million, and that it has some sixteen thousand insane under public care. New York City and Brooklyn together, with two million inhabitants, have asylums which accommodate at present over seven thousand three hundred insane. These statistics are given as preliminary to a description of the conditions in Egypt, where I have been spending the winter. When we turn from a contemplation of the foregoing facts in reference to one of the newest countries in the world to Egypt, which if not the oldest, can yet boast of a civilization sixty centuries ago, we are struck by a remarkable difference. Egypt too has six million of inhabitants, and according to the usual ratio of cases of insanity to population, she should have some twenty thousand insane, or even if she were a much favored nation in this respect, there should still be ten thousand cases within her borders. But the fact before us is that the whole country possesses but one lunatic asylum, located at Cairo, and its daily aggregate of patients rarely exceeds two hundred and fifty. At my visits in December, 1891, and March, 1892, there were two hundred and forty-eight.

It is very difficult to ascertain the reasons for this extraordinary deficiency. It is true that the Koran teaches that the insane and particularly idiots are holy men, that their souls having been taken to heaven, their bodies are without mental guidance. Therefore the Mussulmans do not look upon the insane as sick and requiring medical supervision, but as the happy recipients of a direct blessing from heaven. This is quite different from the early Chris-

*Abstract from the *N. Y. Medical Record*, May 21, 1892.

tian belief in possession by devils. Apoplexy is also regarded by Mohammedans as a visitation from God, and is not treated medically. It is also true that the Egyptians, unacquainted with hospitals, object to them, and prefer to care for their sick in their own homes or villages. While, therefore, it is not infrequent to meet with idiots and mildly insane people in the streets of Cairo and other cities and towns, and while I observed several at various times in places in Upper and Lower Egypt, still, taking all this into consideration, it would seem to be impossible to account for the extraordinarily small number of insane in the country on any other hypothesis than that the percentage of insane is vastly lower here than anywhere else in the world.

I made inquiries of native physicians at various points along the Nile, such as Benisooef, Minieh, and the like, with populations varying from 10,000 to 30,000. They said they seldom or never saw insane people in their practice, since they were not considered patients. Of course, if a man becomes dangerous or homicidal, which is extremely unusual, he is taken into custody by the civil authorities and sent to the Cairo asylum. Inquiries, too, in the villages gave me little additional information, although I would hear of the existence of imbeciles or mild types of insanity in some of these places. It is often the custom to provide them, when at all troublesome, with places to sleep in the desert near at hand and there feed them, a sort of colonization system for which the desert offers exceptional advantages. There is no one to annoy there, nothing to destroy or hurt one's self with, and one can be as noisy as one pleases with perfect immunity.

To return now to the asylum at Cairo, it is of comparatively recent origin. Although Egypt has thrice been the medical centre of the whole world (once in the Twelfth Dynasty, again in the time of Ptolemy

Euergetes, and lastly under the Arabian school), we do not seem to find evidence of the existence of an asylum for lunatics before about 1280 A.D., at which time the Mameluke Kalaoon founded that at Cairo. The patients at that time seem to have been well treated. Harmonious music was employed for the sleepless, and this seems to be a very early use of music as a therapeutic agent. Story-telling (a common custom among the Egyptians), dancing, and light comedy were features of the treatment. Subsequently the institution degenerated. Napoleon in 1800 made some improvements. Many of the patients were then in chains. In 1877 Dr. A. R. Urquhart visited them in an abandoned warehouse across the Nile from Cairo, and wrote a description of their condition in the *Journal of Mental Science* for April, 1879. The following are excerpts from his article :

“Amid all the wonders of Cairo, amid the mosques and the bazaars, amid the gayeties of the oriental Paris sprung up under the fostering care of the Khe-dive, amid the gigantic relics of that wondrous civilization of ancient Egypt, there is no more melancholy, degrading fact than their common madhouse. . . . Doré with pencil among the noisome alleys of London, Dickens with pen in the horrors of the Fleet, have made us familiar with miseries and loathsomeness that would be comfort and cleanliness to *Les Misérables* of Cairo. Sprawling on the uneven, hard-trodden floor of the courtyard, furiously treading its limited space crouching in its filthy recesses, or surrounding us with entreaties and menaces, were some two hundred hopeless lunatics in various stages of nudity. The sun was beating down fiercely, and the stench of the place was almost unbearable.”

He saw six or eight perfectly naked in one room whose walls were smeared with filth and steaming with urine; and one loaded down with chains.

Dr. Tuke made a somewhat similar report of a visit in an article in the same journal of the same date.

In 1880 the warehouse on the Nile was given up and the asylum transferred to quarters which it now occupies on the edge of the desert two or three miles out of Cairo. The present building was once the apartment of the black slave-girls, being the remains of a royal palace which was burned in 1878. Here it was that Dr. F. M. Sandwith visited the lunatics in 1883, and was shocked at the state in which he found them. Filth, hunger, chains, nakedness, and the whip were met on every side. The following year Dr. Sandwith and a native pacha were made chiefs of the Sanitary Department of Egypt. Under Dr. Sandwith's care and attention, the asylum became transformed. He was their Pinel, striking off the chains of the poor creatures, and opening up a new era in their miserable lives. One chain was used to fasten the ankles to the floor, and others were used to chain the wrists to heavy staples in the wall near the floor. Thus the patient was obliged to keep a more or less recumbent position, and a bare board was provided for lying upon. There were no official visitors, and the chief doctor at the time was an Italian Jew without a diploma. There was no responsibility anywhere. Dr. Sandwith improved the sewer system of the building, which was in a horrible state, struck off the chains of the patients, put in an intelligent young doctor with a Paris diploma, together with good male and female attendants, clerk, storekeeper, gardener, carpenter, matting-maker, and the like, organized *fetes*, began gardens, which are now very pretty court-yards, gave them better-lighted and better-ventilated wards, and new bath-rooms, and provided a better regimen and sufficient clothing. All of the reforms carried out were described in a paper in the *Journal of Mental Science* for January, 1889, by Dr. Sandwith. I had the pleasure of mak-

ing two visits to the institution, the last time in the company of Dr. Sandwith. The first time I came unexpectedly. On both occasions I was received by Dr. Emin Bedr, who is in charge, with great cordiality, and shown everything good and bad about the asylum. Dr. Bedr is a Paris graduate and has two assistants, one a graduate from the Cairo Medical School and the other a student. Restraint is only rarely employed, and when needed consists of the long-sleeved camisole. There are two or three padded rooms, such as they have in the Bethlehem Asylum in London, which are occasionally of great service in the treatment of the insane. There is not so much work done by the inmates as might be were there more ambition on the part of the medical direction. All of the wards, beds, and patients' clothing were neat and clean, and the attendants, in their trim uniforms, seemed to be very kind and attentive to their charges. But the nature of the Egyptians is gentle and kindly, and they always treat their unfortunates well. They are only unkind through ignorance.

There is much that is interesting in the forms of insanity met with. One form that I had never seen in my experience in American asylums is that resulting from the use of *cannabis indica*. Of the two hundred and forty-eight patients sixty men and four or five women were insane from the excessive use of hasheesh. Acute cases which recover and are discharged are almost sure to return. The drug is almost always inhaled by smoking. Hasheesh has been in use in Egypt for over six hundred and fifty years, and although the Government has made strenuous efforts to suppress its importation, it still continues to be smuggled in. There exist in Cairo, unknown to the police, several hasheesh joints. I visited one of these one evening and had no difficulty in purchasing samples of hasheesh for inspection.

There were two or three rooms full of men enjoying their pipes and chibouques. The drug is sold in square and diamond-shaped lozenges of a black extract, varying from two cents to ten cents a piece according to quality. The symptoms produced are disorder of the alimentary canal (indigestion and diarrhœa), increased appetite, dilatation of the pupils, drooping eyelids, anæmia, general debility, and delirium. The earliest mental symptom is a marked and increasing timidity, sometimes amounting to a *folie du doute*, or an agoraphobia. Very many cases result in chronic insanity, dementia, or death.

The use of wine and other intoxicating beverages is forbidden by the Koran, and the Egyptians are a very temperate people. Hence insanity from alcoholism is exceedingly uncommon. There were only two or three cases of alcoholic insanity in the asylum at the time of my visit.

Religion is often the cause of insanity, or if not the direct cause, often colors the delusions. One would expect that a religion which so commonly gives rise to extremes of fanaticism, to the orders to be seen in Cairo of Howling and Dancing Dervishes, to the desert pilgrimages to Mecca, to constant poring over the Koran and the like, would have a more than usually bad effect upon the mental balance. It is surely to the influence of the desert that we owe the appearance of so many false prophets. The desert has the peculiarity of developing thoughts in great luxuriance, even if nothing else grows there. If there is anything morbid in one's mind it will grow like an exotic there where there is nothing else to think about. There are a great many false prophets in the Cairo asylum. The Mahdi was another instance. Mahomet was one, and there have been others almost as famous if not as influential. It may be surmised that where polygamy exists as it does in

Egypt, and where divorce can be effected at will by the husband, domestic unhappiness should be a frequent cause of insanity among the women.

* * * * *

General paralysis is very rare, and it has yet to be proven that it even exists among Egyptians. Dr. Schirs, in nineteen years in Cairo, saw five cases, but none were in Egyptians. Dr. Sandwith, who has practised in Cairo eight years and been a frequent visitor at the asylum, has yet to see a case of general paresis in an Egyptian, and altogether has seen only several in orientals. On the day of my visit to the Cairo institution, four cases were pointed out to me by Dr. Bedr as dementia paralytica, but examination showed that three of them were decidedly not paresis, while the fourth was doubtful. This fourth case presented a few uncertain symptoms of general paralysis and was a Copt. It is rather difficult to explain such a rarity of this disease, while just across the sea, in Greece, it is unusually common. * * * Dr. Sandwith thinks it may have something to do with the food, for the Egyptians are almost perfect vegetarians.

The Cairo asylum would be a good school for a study of craniometry and racial characteristics. Among the patients I saw there were Egyptians, Copts, Nubians, Soudanese, Abyssinians, Turks, Greeks, Syrians, Circassians, Jews and Bedouins. A difficulty in the way of cranial measurements would be the scalp disease, from which it would seem that almost no patient is free—favus. And the prevalence of ophthalmic disorders among all classes of people in the country interferes, as I very often found during my sojourn, with diagnosis, not only in some of the nervous disorders, but also in the mental cases.

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